

LXXI.—On certain of the smaller S.-American Cervidæ.
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A. BROCKETS. (Genus *Mazama*.)

OWING to their remarkable variability both in cranial and external characters the Brockets of the genus *Mazama* are exceedingly difficult to work out systematically with any exactness. Thus, while in most cases the widely spread species *Mazama americana* (*M. rufa* auctorum)*, ranging from Guiana to Paraguay and Rio Grande do Sul, has the hairs of its nape reversed up the centre, two specimens in the Museum have no trace of this arrangement, the hairs being directed backwards as usual; and one of these specimens was obtained at the same time and place as examples of the normal reversed type. And, again, of two specimens of *M. tema* from Guatemala, one has the nape-hairs reversed and the other not. *M. simplicicornis*, the common small species, with buffy underside, whose range is coextensive with that of *M. americana*, seems never to have any hairs reversed on the nape.

In the skull the obvious character as to the extension upwards of the premaxillæ towards or to the nasals proves also to be rather variable, examples from the same locality having sometimes considerable differences in this respect. Still at the same time there are certain average differences

* When resuscitating the name *americana* from Erxleben's *Moschus americanus* (Field Museum Nat. Hist. Publ. no. 155, vol. x. p. 43, 1912), it is a pity that Mr. Osgood did not investigate for himself the question as to which species it should be applied to, instead of accepting the synonymies of people who believed it to be a preoccupied name, and one therefore requiring little attention. Instead of its applying to "*M. nemorivagus*" (*M. simplicicornis*), the smaller Brocket of Guiana, it clearly belongs to the larger one, commonly known as *M. rufa*, and must, I am afraid, be used for it.

On the other hand, while differing from Mr. Osgood as to the application of this *americanus*, I cordially agree with him as to the want of nomenclatural status in the case of the other *americanus* on p. 312 of Erxleben's work. There *americanus* was simply a word, not a name, as is shown, among other things, by its being italicized. In Erxleben none of the technical names are italicized, while ordinary words on which he wished to lay emphasis were (cf. "Magnitudo cervi damæ," p. 313, "*altera* . . . *altera*," p. 370). As a consequence, the name of the common North-American deer should be *Odocoileus virginianus*, Bodd., not *americanus*, Erxl.

between the species, *M. americana*, for example, having generally a naso-premaxillary articulation, while the species now described as *M. zetta* has not. The preorbital pits are fairly deep in *M. rufina* and *bricenii*, shallow in all the other species. I may note that a fine male specimen of *M. bricenii*, recently received, is considerably larger than the typical female, its skull having a condylo-basal length of 168 mm.

The following forms appear to need description :—

Mazama zetta, sp. n.

A brown species related to *M. americana*.

Size about as in *M. americana*, but form rather stouter. General colour rufous brown, browner and less rufous than in *americana*. Head distinctly brown, with indistinct rufous markings above and below eyes and on sides of muzzle. Ears brown, their bases below whitish. Chin and interramia dull whitish. Neck brown, the hairs along the whole centre of its upper side reversed (in all three specimens available). Body dark rufous brown above, becoming more rufous posteriorly. Chest and belly rufous brown, the extent to which the brown is tinged with rufous varying considerably. Limbs dark brown, paler rufous on their internal aspect proximally, darker rufous terminally. Tail dark rufous brown above, white below.

Skull shorter and more stoutly built than that of *M. americana*. Premaxillæ shorter than in that species, often falling far short of the nasals, and only rarely just reaching them.

Upper tooth-row of the type, a small subadult female, 60 mm.

Dimensions of fully adult male and female skulls (85. 4. 22. 6 and 8) :—

Condylo-basal length 187, 190 mm.; zygomatic breadth 96, 95; length of nasals 60, 62; interorbital breadth 42, 46; gnathion to front of anterior premolar 63, 63; palatal length 124, 121; breadth between outer sides of m^2 65, 66; upper tooth-row 60, 61.

Hab. Medellin, Antioquia, Colombia.

Type. Young adult female. B.M. no. 78. 8. 31. 3. Collected by Mr. J. K. Salmon. A stuffed specimen, two skins, and seven skulls examined.

This beautiful little Deer was determined by Sir Victor Brooke as *M. rufina*, Pucheran, but there is no doubt that that is a mountain form allied to *M. bricenii*. *M. zetta*, on the other hand, is a representative of *M. americana*, from which it differs by its stouter form, browner colour, shorter

skull, and the lesser extension of the premaxillæ towards the nasals.

Mazama sheila, sp. n.

A small pale rufous ally of *M. americana*.

Size conspicuously smaller than in *M. zetta*. Form about as in that species. Fur close and short. Nape-hairs not reversed (in the single specimen). General colour bright rufous (between orange-rufous and tawny of Ridgway). Muzzle, centre of crown, and neck brown, supraorbital lines rufous, not sharply defined. Ears pale brown, with distinct patches of white at the base of their inner edges. Chin and interramia, a patch on chest, and anal region whitish; rest of under surface rufous, like back. Fore limbs rufous throughout. Hind limbs rufous, but the metatarsals brown, darker posteriorly. Tail rufous above, white below.

Skull of the same somewhat broad squat shape as in *M. zetta*, but far smaller. Premaxillæ not quite reaching to the nasals.

Dimensions of the typical skull (adult, but not old):—

Condyllo-basal length 177 mm.; zygomatic breadth 85; length of nasals 48; interorbital breadth 39; gnathion to front of anterior premolar 58; palatal length 111; breadth between outer sides of m^2 63; upper tooth-row 55.

Hab. Lowlands near Merida, Venezuela. Type from the Montaña de Limones. Alt. 50 m.

Type. Adult male. B.M. no. 13.4.24.4. Collected 17th October, 1910, by S. Briceño and Sons.

This Brocket is readily distinguishable by its bright rufous colour, unreversed nape-hairs, and small size, as compared with its only near allies, *M. americana* and *zetta*.

Coming from somewhere near the same region, Osgood's *M. americana citus** has nothing to do with this animal, but is a member of the *M. simplicicornis* group.

Mazama americana jucunda, subsp. n.

Similar in general characters to the ordinary *M. americana* of eastern South America (*M. rufa* auctorum), but the skull conspicuously shorter. Fur of medium length; nape-hairs reversed (one skin only). Colour above of head and neck brown, of body bright rufous fawn, not very unlike that of *M. zetta*. Under surface, as usual in this group, whitish on chin and throat, rufous, like back, on belly. Limbs brown

* Cf. footnote above.

proximally, rufous on the digits. Tail dark rufous above, white below.

Skull, as compared with that of ordinary *M. americana*, very much shorter, but of about the same breadth. Pre-maxillæ just touching the nasals in the two skulls available. Nasals of adult male remarkably broad and short.

Skull-dimensions of an adult male and an immature female (the latter the type) :—

Condyllo-basal length 178, 175; zygomatic breadth 88, 80; length of nasals 45, 57; interorbital breadth 46, 38; gnathion to front of anterior premolar 55, 57; palatal length 109, 109; breadth between outer sides of m^2 65, 57; upper tooth-row 61, 58.

Hab. Serra do Mar, Parana, S. Brazil. Type from Roça Nova; alt. 1000 m.

Type. Immature female (milk-teeth still in place, but basilar suture closed); skin and skull. B.M. no. 3. 7. 1. 103. Original number 836. Collected 9th September, 1901, by Alphonse Robert. An adult male skull also examined.

This may be the small rufous Deer which German writers have assigned to *M. rufina*, but it has certainly nothing to do with that species, being related to *M. americana*, of which it forms a small short-headed race.

Adult skulls of *M. americana* are about 205–210 mm. in condyllo-basal length, and a female specimen, younger than the type of *jucunda*, has this dimension 202 mm.

B. THE ECUADOREAN PUDU. (*Pudua mephistophiles*, de Wint.)

The highland Pudu of Ecuador, discovered by Consul Söderström and described by Mr. de Winton as *Pudua mephistophiles**, differs so markedly from the Chilean species, *Pudu pudu*, that I consider that it ought to be separated generically from the latter, and would propose for the new genus the name of *Pudella*.

The most noticeable difference is the entire absence of the preorbital glands in *Pudella*, there being no external orifice in the skin, and the lacrymal bone being only faintly concave † in the usual position of the lacrymal pit. In the true Pudu, on the other hand, the glands are unusually well developed, with an obvious opening externally, their pit in the skull being very deep, with sharply defined edges.

* P. Z. S. 1896, p. 508.

† As I have previously pointed out, the skull figured and described by de Winton is that of a *Mazama* (probably *M. rufina*).

In *Pudu* the premaxillæ do not reach the nasals, in *Pudella* they do.

In *Pudu* the hoofs, both large and small, are of the normal shape; in *Pudella* they are unusually narrow and pointed.

In *Pudu* the middle lower incisors are not disproportionately larger than the others, being barely twice the breadth of the second pair; in *Pudella* their blade is three or four times the size of that of i_2 , which in turn is little larger than i_3 and the canine.

In *Pudu* the naked rhinarium is but small, in *Pudella* unusually large, projecting backwards in the middle line.

No doubt the two genera are closely allied, but, in the absence of any connecting links, I think a special name for the Andean form is advisable.

PROCEEDINGS OF LEARNED SOCIETIES.

GEOLOGICAL SOCIETY.

November 6th, 1912.—Dr. Aubrey Strahan, F.R.S., President,
in the Chair.

The following communications were read:—

1. 'A Contribution to our Knowledge of Wealden Floras, with Special Reference to a Collection of Plants from Sussex.' By Albert Charles Seward, M.A., F.R.S., F.L.S., F.G.S., Professor of Botany in Cambridge University.

In this paper an account is given of specimens of Wealden plants from the Sussex coast, for the most part from the neighbourhood of Fairlight, acquired by the British Museum since 1895, the date of publication of the second part of the Wealden Flora (British Museum Catalogue). The majority of the fossils have been presented to the National Collection by Father Félix Pelletier and Father Teilhard de Chardin, by whom they were collected, and who worked in association with Mr. Charles Dawson, F.S.A., F.G.S.; the remainder form part of the Rufford Collection. Fresh information is given in regard to several previously recorded species, and the following new types are described:—A new species of *Lycopodites* (a lycopodiaceous plant with the habit of a *Selaginella*); a new species